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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/916,629 08/22/97 COBBLEY

C 97-0098

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IM22/1122

EXAMINER

GALLAGHER, J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 11/22/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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# Office Action Summary

Application No.	Applicant(s)		
Examiner	Group Art Unit		

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 13 AUGUST 1999.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-22 and 40-44 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-22 and 40-44 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiLeo et al in view of either Mikuni et al or Nishino et al.

DiLeo et al disclose that it is known to bond/adhesive<sup>2</sup> and semiconductor chip/element/device to a leadframe utilizing a room temperature curable (epoxy) adhesive.

(Figure 2, abstract, col 1, lines 7-11 and N.B. lines 28-29, col 2, lines 1-14 and 38-56, col 3, lines 3-37 and N.B. lines 34-37.)

Mikuni et al (N.B. col 1, lines 9-16 and 29-30) and Nishino (abstract, N.B. col 1, lines 8-14, col 2, line 60 thru col 3, line 29) both disclose that cyanoacrylate monomers (a) are widely/generally used as instantaneous adhesive<sup>3</sup> for a variety of substrates (e.g. metals, glasses etc.) <sup>a</sup>And also in the bonding of electrical and electronic parts; (b) cure in a short period of time at

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room temperature (i.e. without heat); and <sup>(c)</sup> ~~φ~~ are initiated to polymerize by water or basic substances either present <sup>or</sup> ~~or~~ (i.e. as/from humidity) or applied to the substrate surfaces to be bonded. It would have been obvious to one of ordinary skill in this art to employ the cyanoacrylate adhesives of either of the two secondary references in the bonding process of DiLeo et al in place of the corresponding, analogous adhesive employed therein; mere substitution of one known room temperature curing (and also apparently/beneficially faster acting/setting) adhesive for another involved.

4. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiLeo et al in view of either Nishino et al or Litke.

Nishino et al (see paragraph 3, above) and Litke (abstract, col 1 lines 11-34, col 3, lines 18-22 and 50-54) both disclose that it is known to incorporate a silica filler in a cyanoacrylate adhesive for various (and beneficial) effects (e.g. thixotropy), such that it would have been obvious to one of ordinary skill in this but to employ such filled adhesives in the bonding process of DiLeo et al in place of the corresponding, analogous adhesive employed therein; again; mere substitution of one known room temperature curing adhesive for another involved.

5. The foregoing art rejections of paragraphs 3-4 are repeated with the addition of O'Sullivan et al <sup>and</sup> ~~and~~ a secondary reference to the statement of each.

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O'Sullivan et al disclose that cyanoacrylate adhesives (i.e. of the type shown in Mikuni et al, Nishino et al and Litke) are known to cure in less than a/one minute and in <sup>many</sup> ~~very~~ cases in a matter of seconds (N.B. col 1, lines 25-44). This reference is applied specifically and primarily for the sake of exposition and completeness, its teaching along the foregoing line being held/seen to be implicitly encompassed within that of the other three references referred to above.

6. Claims 21 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiLeo et al in view of Burnett et al.

Burnett et al disclose that anaerobic curing acrylate/acrylic monomers are <sup>known</sup> ~~known~~ to (a) polymerize rapidly at room temperature (i.e. without heat); and (b) find utility as adhesive <sup>s</sup> in the bonding of various (e.g. electrical) substrates (N.B. col 1, lines 38-42, col <sup>3</sup> ~~2~~, lines 47-58, col 5 lines 4-26, col 18, lines 34-38, col 19, lines 15-24 and 54-75, col 20, lines 1-16). It would have been obvious to one of ordinary skill in the art to employ the anaerobic adhesives of Burnett et al in the bonding process of DiLeo et al in place of the corresponding, analogous adhesive employed therein; mere substitution of one known room temperature curable adhesive for another involved.

7. Claims 22 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiLeo et al in view of Burnett et al and Gruber et al.

Gruber et al disclose that it is known to incorporate an (e.g. silica) filler in an acrylate based anaerobic adhesive (col 1, lines 7-15, N.B. col 4, lines 15-22), such that it would have been obvious to one of ordinary skill in the art to incorporate such a conventional, documented ingredient/component in the adhesive of Burnett et al for use in the process of DiLeo et al.

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8. Applicant's arguments with respect to claims 1-22 and 40-44, filed 13 August 1999, have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. J. Gallagher whose telephone number is (703) 308-1971. The examiner can normally be reached on Monday - Friday from approximately 8:30 am to 5:00 pm. The examiner can also be reached on alternate N/A.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball, can be reached on (703) 308-2058. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661/0662.

  
JOHN J. GALLAGHER  
PRIMARY EXAMINER  
ART UNIT 131 1733

  
Gallagher/RH  
11-16-99  
November 9, 1999